Overview

- Innovative and stimulating: Fresh empirical look at taxes, labor supply, and risky labor income.
- When outcome is risky, progressive marginal taxes can discourage risky self employment.
- Convexity effect dominates insurance effect.
- Results substantially robust to industry and occupation interactions.

Broad implications

- (Asymmetry) Convexity of tax schedule reduces expected after-tax value of risky future earnings.
  - Discourages risk taking.
- (Insurance) After-tax income has a lower variance. Government shares the risk.
  - Encourages risk taking.
- Asymmetry/convexity effect appears to dominate in Gentry/Hubbard results.

Additional Considerations

- (Observational uncertainty) Prospective entrants into self employment know more about their future earnings than we do.
- Entrants self select into self employment.
  - Marginal tax rate is systematically understated for new entrants.
  - Understatement increases with convexity.
  - Estimated effect of convexity biased.
- Difficult to separate effects of entrant behavior under uncertainty from effects of uncertainty about entrants.

Uncertainty of earnings

Table 2: Wage Growth and Self-employment		
	Real Wage Growth over Three Years (%)	
	Entrants from Year *t* to Year *t+1*	Non-entrants from Year *t* to Year *t+1*
Mean	33.4	10.1
Standard Deviation	172.3	84.5
5th percentile	-85.4	-78.1
10th percentile	-64.8	-46.6
25th percentile	-32.5	-15.1
Median	3.14	2.65
75th percentile	43.9	22.7
90th percentile	119.3	57.1
95th percentile	234.0	95.2
Number of observations	1,156	36,189

Source: Authors' calculations based on data from the PSID, 1978-1993.

- Table from "Tax Policy and Entry Into Entrepreneurship," Gentry and Hubbard, 2004.
- Suggests that self employment is more risky.
- Empirical distribution used to measure convexity.

Uncertainty of Earnings

- Empirical distribution is not a good measure of the uncertainty faced by potential entrants.
  - Includes entrants' uncertainty.
  - Includes our uncertainty about entrants.
- Clearly influenced by self selection.
  - Entrants likely to choose self employment in expectation of higher earnings.

Uncertainty of Earnings

- Entrants' knowledge about future earnings.
  - Changes in labor supply, e.g., moonlighting, early retirement, outside teaching or consulting.
  - Value of accumulated experience/human capital in self employment.
  - Good opportunity: Right place at the right time.
- Relative skewness of distribution is consistent with self selection.
  - Ratio of mean to median is about 10:1 for entrants.
  - Ratio is about 4:1 for non entrants.
- Relative dispersion is not a good measure of the relative risk faced by entrants.
  - Standard deviation about twice as high.

Effects on Estimation

- Effect on level of convexity measure.
  - Empirical distribution overstates dispersion.
  - Tends to overstate convexity faced by potential new entrants.
- Not likely to be important.
  - Will bias coefficient of convexity in inverse proportion to bias in measure.
  - Doesn’t matter as long as same convexity measure used for estimation, interpretation, and policy predictions.

Effects on Estimation

- Convexity and measurement error in marginal tax rate.
- Marginal tax rate measurement error.
  - Measured at last salary earnings plus growth rate.
  - Perhaps good measure of tax rate at margin on labor income of non-entrants.
  - Likely to understate tax rate at margin for those who select into self employment.
- Correlation with measurement error.
  - Understatement is largest for entrants in the most convex regions of tax schedule.
  - Convexity negatively correlated with measurement error in tax rate.

Effects on Estimation

- Negative correlation.
  - Likely to bias estimated coefficient of convexity coefficient downward.
  - If higher marginal tax rates discourage entry.
- Self selection will cause overstatement of (negative) effect of convexity.

Implications

- Can't separate from Gentry/Hubbard estimates:
  - Negative effect of convexity due to entrant behavior toward uncertainty.
  - Negative effect of convexity due to observational uncertainty, self selection, and measurement error bias in marginal tax rate.
- Can't conclude yet whether convexity effect dominates the insurance effect.

Conclusions

- Stimulating and important line of research.
- Should take criticism with grain of salt.
  - Size of bias is an empirical issue.
- Nonlinearity of tax schedule important either way.
  - How does uncertainty affects the influence of taxes on self-employment decisions?
  - How does uncertainty affect our ability to measure the influence of taxes?
- A challenge for future research.